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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,545	09/20/1999	RAYMOND G. GALLAGHER	1185R1	2392
24959 7590 03/02/2010 PPG INDUSTRIES INC INTELLECTUAL PROPERTY DEPT ONE PPG PLACE PITTSBURGH, PA 15272				
EXAMINER				
CANFIELD, ROBERT				
ART UNIT		PAPER NUMBER		
3635				
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03/02/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/399,545

**Applicant(s)**

GALLAGHER, RAYMOND G.

**Examiner**

ROBERT J. CANFIELD

**Art Unit**

3635

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4-6, 8-46, 48-53 and 55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35-46, 48-53 and 55 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 8-25, 28-32 is/are rejected.
- 7) ☒ Claim(s) 26, 27, 33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_

1. This Office action is in response to the amendment filed 10/13/09. Claims 1, 2, 4-6, 8-46, 48-53 and 55 are pending. Claims 3, 7, 47 and 54 have been canceled.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, 4-6 and 9-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At line 11 of claim 1, the language "with open end of the U formed" is unclear. It appears it should read - - with the open end of the U - -. This same issue occurs again in claim 13.

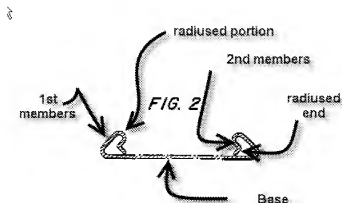
At line 3 of claim 6, the language "spaced from inner surface" is unclear. It appears the should define the inner surface of the base and then recite - - spaced from the inner surface of the base - -.

The preambles of claims 16-20 fail to agree with that of claim 13 from which they depend.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2, 4, 5 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent D 205,824 to Fisher.

Fisher provides a channel member having each of the elements of the claims as shown below and which is capable of being used as a spacer. The element has inherently been shaped.



6. Claims 1, 2 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,428,299 to Mogensen.

Note the channel elements 1 shown in figures 5 and 6. The elements provide all of the structural features called for in the claims and is capable of being used as a spacer. The element has inherently been shaped.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,464,874 to Shea Jr. et al.

Shea provides a window spacer comprised of a base 24, an unbent one piece first leg 31 and an unbent one piece second leg, wherein the legs are connected to the base to provide a U-shaped cross section and wherein the

thickness of the legs is greater than the thickness of the base as clearly illustrated in Figure 2.

Shea fails to provide that the thickness of each of the first and second legs is 2 to 5 times greater than the thickness of the base to reduce torsional twist and to reduce thermal conductivity.

It would have been obvious at the time of the invention to one having ordinary skill in the art that the thickness of the legs of Shea could have been dimensioned to 2 to 5 times the thickness of the base. It would have been an obvious matter of design choice to modify the structure of Shea to provide thickness of the walls as 2 to 5 times the thickness of the base since such a modification would have involved a mere change in the size of the components and a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). One of ordinary skill in the art would have readily recognized that both torsional twist and thermal conductivity could be reduced by increasing the thickness of the legs. It is nothing other routine engineering in the mechanics of deformable solids. Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. There would have been no unexpected or unpredictable result obtained by increasing the thickness of the legs of Shea to 2 to 5 times the thickness of the base particularly in view of the fact that Shea already shows it desirable to make the legs thicker than the base.

8. Claims 21-25, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 475 213 to Hodek in view of U.S. Patent 1,457,303 to Higgins.

Hodek provides an insulating unit comprised of a pair of sheets 12 and 14 and a U-shaped spacer frame 158 formed from spacer stock (figure 12) adhered between the sheets. The spacer frame having a base and a pair of upstanding legs. A bead of moisture pervious adhesive 160 having a desiccant 162 therein is provided on the base between the legs.

Hodek fails to provide that each of the legs is comprised of a first member joined to a second member to have a U-shaped cross section.

Higgins teaches that at the time of the invention it was known that the upstanding legs of a U-shaped beam could be provided with doubled thickness as shown in figure 3 thus forming inverted U-shapes so as to increase the rigidity of the beam. The legs or flanges are twice the thickness of the base and can be considered to have the "generally hairpin configuration" of claim 24.

It would have been obvious at the time of the invention to one having ordinary skill in the art that the U-shaped spacer of Hodek could have also had its upstanding legs folded over to a double thickness so as to increase the rigidity of the spacer as taught by Higgins.

To have provided a sheet mounted between the legs would have been obvious at the time of the invention to one having ordinary skill in the art as it is old and well known to provide intermediate sheets with insulating

glass units for reasons such as increased thermal efficiency or to provide shading.

9. Claims 35-46, 48-53 and 55 are allowed.
10. Claims 6 and 9-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
11. Claims 26, 27, 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Applicant's arguments with respect to claim 8 in view of Shea have been considered but are moot in view of the new ground(s) of rejection.

Applicant's argument that one of ordinary skill in the art would not combine Higgins and Hodek because there is no discussion in Hodek of a problem with torsional twisting is not found persuasive. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is the Higgins reference which provides the motivation to modify Hodek by teaching that it was known at the time of the invention to provide a double walled leg member on a channel member for increased rigidity.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the first and second members of the first and second legs are spaced from one another) are not recited in rejected claims 21+. Although the claims are interpreted in

light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT J. CANFIELD whose telephone number is (571)272-6840. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rich Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert J Canfield  
Primary Examiner  
Art Unit 3635

/Robert J Canfield/  
Primary Examiner, Art Unit 3635